Volume 72 1977

Table of Contents

No. 1 pp. 1—212 issued on January 3, 1977
No. 2 pp. 213—424 issued on January 17, 1977
No. 3 pp. 425—624 issued on February 1, 1977

1 Recommendations for Measurement and Presentation of Biochemical Equilibrium Data. Interunion Commission on Biothermodynamics

9 Biochemistry of Development in Insects. Triacylglycerol and Phosphoglyceride Biosynthesis by Subcellular Fractions
A. Megias, A. M. Municio, and M. A. Perez-Albarsanz

17 Rhodanese-Mediated Sulfur Transfer to Succinate Dehydrogenase
F. Bonomi, S. Pagani, P. Cerletti, and C. Cannella

25 Lysozyme from the Insect *Ceratitis capitata* Eggs
J. M. Fernandez-Sousa, J. G. Gavilanes, A. M. Municio, A. Perez-Aranda, and R. Rodriguez

35 Ribitol-Containing Lipopolysaccharides from *Proteus mirabilis* and Their Serological Relationship
J. Gmeiner, H. Mayer, I. Fromme, K. Kotelko, and K. Zych

41 Lignoceric Acid Biosynthesis in the Developing Brain. Activities of Mitochondrial Acetyl-CoA-Dependent Synthesis and Microsomal Malonyl-CoA Chain-Elongating System in Relation to Myelination. Comparison between Normal Mouse and Dysmyelinating Mutants (Quaking and Jimpy)
J.-M. Bourre, M. Y. Paturneau-Jouas, O. L. Daudu, and N. A. Baumann

49 The Effect of Initiation Factor IF-1 on the Dissociation of 70-S Ribosomes of *Escherichia coli*
N. Naaktgeboren, K. Roobol, and H. O. Voorma

57 Proton Translocation and ATP Formation Coupled to Electron Transport from H_2O to the Primary Acceptor of Photosystem 2
G. Ben-Hayyim and J. Neumann

63 Structural Studies on the Coat Protein of Alfalfa Mosaic Virus. The Complete Primary Structure
G. M. A. van Beynum, J. M. de Graaf, A. Castel, B. Kraal, and L. Bosch

79 Calorimetric Studies on Melting of $tRNA^{Phe}$ (Yeast)
H.-J. Hinz, V. V. Filimonov, and P. L. Privalov

87 *myo*-Inositol Transport in *Klebsiella aerogenes*. *scyllo*-Inositol, a Non-metabolizable Substrate for the Study of the *myo*-Inositol Transport System
J. Deshusses and G. Reber

93 Transport of Cyclitols by a Proton Symport in *Klebsiella aerogenes*
G. Reber, M. Mermod, and J. Deshusses

101 Assymetry of the *myo*-Inositol Transport System in *Klebsiella aerogenes*. Energy is Necessary to Create the Assymetry of the Transport System
J. Deshusses and G. Reber

107 Kinetic Studies on a 4-Methoxybenzoate O-Demethylase from *Pseudomonas putida*
F.-H. Bernhardt, W. Nastainczyk, and V. Seydewitz

117 Interactions of Yeast $tRNA^{Phe}$ with Ribosomes from Yeast and *Escherichia coli*. A Fluorescence Spectroscopic Study
J. M. Robertson, M. Kahan, W. Wintermeyer, and H. G. Zachau

127 Glucose Effect in *tgl* Mutant of *Escherichia coli* K12 Defective in Methyl-α-D-glucoside Transport
R. S. Erlagaeva, T. N. Bolshakova, M. V. Shulgina, G. I. Bourd, and V. N. Gershanovitch

137 Cyclic Nucleotide Hydrolysis in the Thyroid Gland. General Properties and Key Role in the Interrelations between Concentrations of Adenosine 3′:5′-Monophosphate and Guanosine 3′:5′-Monophosphate
C. Erneux, J. van Sande, J. E. Dumont, and J.-M. Boeynaems

149 Formate Hydrogenlyase System in *Salmonella typhimurium* LT2
M. Chippaux, M.-C. Pascal, and F. Casse

157 On the Optical Activity of Ionized Tyrosyl Residues in Ovine Lutropin
M. Ascoli, D. N. Ward, and B. Jirgensons

167 Phosphorylation *in vitro* and *in vivo* of Ribosomal Proteins from *Saccharomyces cerevisiae*
J. Hébert, M. Pierre, and J. E. Loeb

175 Binding Studies of a Spin-Labelled Oxidized Coenzyme to Bovine-Liver Glutamate Dehydrogenase
A. Zantema, W. E. Trommer, H. Wenzel, and G. T. Robillard

185 Kinetics and Regulation of Sarcoplasmic Reticulum ATPase
Y. Dupont

191 The Stereochemical Basis of Template Function
H. R. Rackwitz and K. H. Scheit

201 Ligand-Dependent Bohr Effect of *Chironomus* Hemoglobins
G. Steffens, G. Buse, and A. Wollmer

207 Inequivalent Conformational Response of *Chironomus* Hemoglobins to Ligation with O_2 and CO. A Circular-Dichroism and Infrared-Spectroscopic Study
A. Wollmer, G. Steffens, and G. Buse

213 Photooxidation of Human Serum Albumin and Its Complex with Bilirubin
A. O. Pedersen, F. Schønheyder, and R. Brodersen

223 Purification and Control of Bovine Adrenal Cortical Cholesterol Ester Hydrolase and Evidence for the Activation of the Enzyme by a Phosphorylation
G. J. Beckett and G. S. Boyd

235 CO_2-Mediated Control of Fatty Acid Metabolism in Isolated Hamster Brown-Fat Cells during Norepinephrine Stimulation
B. Pettersson

241 Adenosine 3′:5′-Monophosphate Metabolism and Turnover in Dog Thyroid Slices
J. van Sande, S. Swillens, and J. E. Dumont

247 Synthesis of Stereospecifically Deuterated Phenylalanines and Determination of Their Configuration
K. Bartl, C. Cavalar, T. Krebs, E. Ripp, J. Rétey, W. E. Hull, H. Günther, and H. Simon

251 Stereospecificity of Phenylpyruvate Tautomerase. A Convenient Method for the Preparation of Chirally Labelled Phenylpyruvates
J. Rétey, K. Bartl, E. Ripp, and W. E. Hull

259 Role of Thyroid Gland on the Peroxidase and Iodinating Enzymes of Submaxillary Gland
T. Chandra, R. Das, and A. G. Datta

265 Effect of 2-Deoxy-D-glucose on the Cell-Surface Glycoproteins of Hamster Fibroblasts
R. C. Hughes, A. Meager, and R. Nairn

275 Properties of a Baby-Hamster-Kidney Cell Line with Increased Resistance to 2-Deoxy-D-glucose
A. Meager, R. Nairn, and R. C. Hughes

283 On the Role of Ferredoxin and Ferredoxin-$NADP^+$ Reductase in Cyclic Electron Transport of Spinach Chloroplasts
H. Böhme

291 Organization of Sequences in Avian Globin mRNA
R. J. Crawford, A. C. Scott, and J. R. E. Wells

301 Mitochondrial and Cytosolic NADPH Systems and Isocitrate Dehydrogenase Indicator Metabolites during Ureogenesis from Ammonia in Isolated Rat Hepatocytes
H. Sies, T. P. M. Akerboom, and J. M. Tager

309 Preparation and Coenzymic Activity of Soluble Polyethyleneimine-Bound $NADP^+$ Derivatives
P. Zappelli, R. Pappa, A. Rossodivita, and L. Re

317 Purification and Properties of Blood-Group-Specific Lectins from *Vicia cracca*
H. Rüdiger

323 Inhibition of Translation in Eukaryotic Systems by Harringtonine
M. Fresno, A. Jiménez, and D. Vázquez

331 RNA Polymerase and RNA Synthesis in the Silk Glands of the Silkworm *Bombyx mori*
S. Sridhara, M.-M. Portier, and J. Daillie

341 Properties of the Penicillin-Binding Proteins of *Escherichia coli* K 12
B. G. Spratt

353 Biophysical and Enzymological Studies upon the Interaction of *trans*-Cinnamic Acid with Higher Plant Microsomal Cytochromes *P*-450
P. R. Rich and C. J. Lamb

361 Terminal Nucleotide Sequences of 17-S Ribosomal RNA and Its Immediate Precursor 18-S RNA in Yeast
P. de Jonge, J. Klootwijk, and R. J. Planta

371 2′-Deoxy-2′-azidocytidine, a New Inhibitor of DNA Replication in Mammalian Cells
L. Skoog, G. Bjursell, L. Thelander, T. Hägerström, J. Hobbs, and F. Eckstein

379 The Synthesis of Macromolecular 3-Hydroxyproline by Attaching and Confluent Cultures of Human Fibroblasts
K. J. Lembach, R. E. Branson, P. B. Hewgley, and L. W. Cunningham

385 Fate of Histone Messenger RNA in Synchronized HeLa Cells in the Absence of Initiation of Protein Synthesis
H. Stahl and D. Gallwitz

393 On the Competition between Protamines and Histones: Studies Directed towards the Understanding of Spermiogenesis
J. Bode, L. Willmitzer, and K. Opatz

405 Progesterone Receptors in the Chick Oviduct. Determination of the Total Concentration of Binding Sites in the Cytosol and Nuclear Fraction and Effect of Progesterone on Their Distribution
J. Mešter and E.-E. Baulieu

415 Purification of Bovine Adrenal-Cortex Plasma-Membrane Vesicles Containing a Highly Corticotropin-Sensitive Adenylate-Cyclase System and Angiotensin-II-Binding Sites
W. Schlegel and R. Schwyzer

425 The Primary Structure of Yeast Alcohol Dehydrogenase
H. Jörnvall

443 Differences between Alcohol Dehydrogenases. Structural Properties and Evolutionary Aspects
H. Jörnvall

453 Nucleotide Sequence ($n = 159$) of the Amino-Acid-Accepting 3′-OH Extremity of Turnip-Yellow-Mosaic-Virus RNA and the Last Portion of Its Coat-Protein Cistron
J.-P. Briand, G. Jonard, H. Guilley, K. Richards, and L. Hirth

465 Studies on the Sequence of the 3′-Terminal Region of Turnip-Yellow-Mosaic-Virus RNA
M. Silberklang, A. Prochiantz, A.-L. Haenni, and U. L. Rajbhandary

479 Membrane Fractions from the Outer Layers of Spores of *Bacillus thuringiensis* with Toxicity to Lepidopterous Larvae
P. S. Scherrer and H. J. Somerville

491 Subcellular Distribution of Aminoacyl-tRNA Synthetases in Various Eukaryotic Cells
M. A. Ussery, W. K. Tanaka, and B. Hardesty

501 DNA Synthesis in HeLa Cells and Isolated Nuclei after Treatment with an Inhibitor of Spermidine Synthesis, Methyl Glyoxal Bis(guanylhydrazone)
H. Krokan and A. Eriksen

509 Characterization and Partial Purification of an Inducible Protein Related to Hexose Proton Cotransport of *Chlorella vulgaris*
F. Fenzl, M. Decker, D. Haass, and W. Tanner

515 Selective Inhibition of $tRNA^{Tyr}$ Transcription by Guanosine 3′-Diphosphate 5′-Diphosphate
P. Debenham and A. Travers

525 The *Euglena gracilis* Chloroplast Genome: Analysis by Restriction Enzymes
H. Kopecka, E. J. Crouse, and E. Stutz

537 Accumulation of $tRNA_f^{Met}$ on 80-S Ribosomes *in vitro* under the Influence of a Met-tRNA Deacylase from Rat-Liver Microsomes
O. Nygård and T. Hultin

543 Bacteriophage-T7-Induced DNA-Priming Protein. A Novel Enzyme Involved in DNA Replication
E. Scherzinger, E. Lanka, G. Morelli, D. Seiffert, and A. Yuki

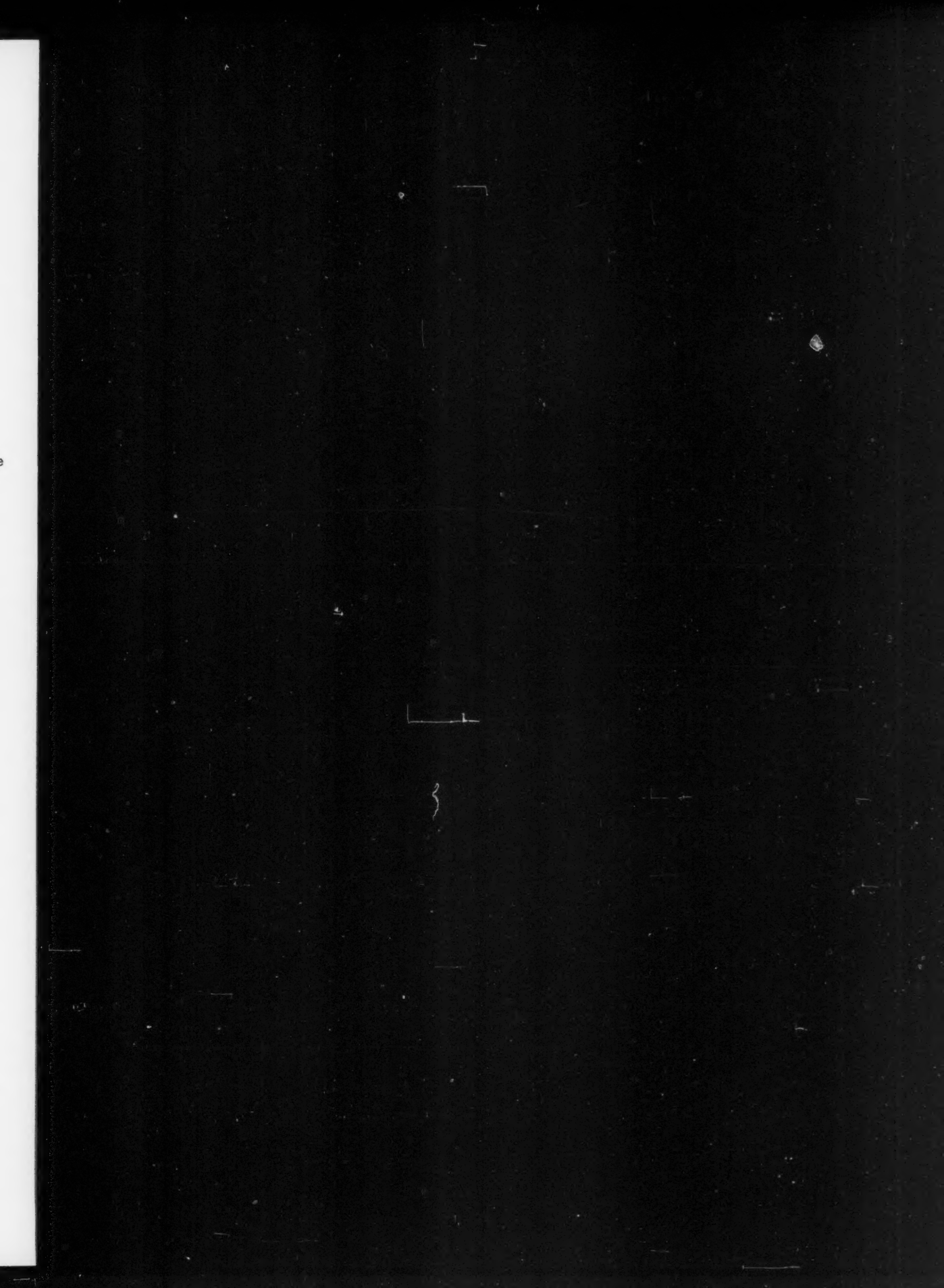
559 The Functional and Fluorescence Properties of *Escherichia coli* RNA Polymerase Reacted with Fluorescamine
S. Damjanovich, W. Bähr, and T. M. Jovin

571 Purification and Properties of a Periplasmic Protein Related to *sn*-Glycerol-3-phosphate Transport in *Escherichia coli*
W. Boos, I. Hartig-Becken, and K. Altendorf

583 Forms AI and AII DNA-dependent RNA Polymerases as Components of Two Defined Pools of Polymerase Activity in Mammalian Cells
B. L. Kellas, J. L. Austoker, T. J. C. Beebee, and P. H. W. Butterworth

595 On the Involvement of Cytochrome *P*-450 in the Binding of Ribosomes to a Subfraction of Rat-Liver Rapidly Sedimenting Endoplasmic Reticulum
R. Ohlsson and B. Jergil

605 The Roles of c-Type Cytochromes in Algal Photosynthesis. Extraction from Algae of a Cytochrome Similar to Higher Plant Cytochrome *f*
P. M. Wood

613 The Amino-Acid Sequence of the Dihydrofolate Reductase of a Trimethoprim-Resistant Strain of *Escherichia coli*
D. Stone, A. W. Phillips, and J. J. Burchall

Indexed in Current Contents